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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,345	09/24/2001	Yukihiro Kusano	Q65935	4619

7590 12/08/2006
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EXAMINER	
TORRES VELAZQUEZ, NORCA LIZ	
ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,345

Applicant(s)

KUSANO ET AL.

Examiner

Norca L. Torres-Velazquez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006 (RCE).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. <u>120106</u> . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

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DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 10, 2006 has been entered.

Response to Amendment

2. The Second Supplemental Declaration under 37 CFR 1.132 filed on October 10, 2006 is insufficient to overcome the rejection of claims 6-9 based upon rejection under 35 U.S.C. 103(a) over JP 10-053010 in view of YOSHIKAWA et al. (US 4,872,932) as set forth in the last Office action because: The photos submitted with the Declaration were scanned into the Application file and the Examiner is not able to consider them since the quality of the scan is very poor. Therefore, the Examiner is not able to consider all the evidence showing the unexpectedly superior results argued by Applicants. Applicants are advised to submit the photos as an artifact to the case, so that they are available in their original form during the examination of the application.

Response to Arguments

3. Applicant's arguments filed October 10, 2006 have been fully considered but they are not persuasive.

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a. Applicant's arguments depend on the submitted Declaration under 1.132, but as explained above, the Examiner was not able to fully examine the evidence provided.

Therefore, the rejections of claims 6-9 is maintained herein for the reasons of record.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being obvious over JP 10-053010 in view of YOSHIKAWA et al. (US 4,872,932) as stated in previous office action.

The JP 10-053010 reference teaches the use of unwoven fabric (non-woven fabric) in a rubber-filament complex of a fiber reinforced member layer in a pneumatic radial tire. (Abstract) Figure 1 shows a tire structure that includes a fiber reinforcement member layer 8a, 8b between the carcass layer 2 and sidewall rubber 7a, 7b. [0024] The JP'010 reference uses a conjugation of a non-vulcanized rubber composition for fiber, teaches using solvents and also methods that involve providing a tackiness (adhesive) to the nonwoven fabric. The reference teaches that when adhesion is inadequate, it is sufficient to perform dipping heat-setting processing to a filament fiber like the case where the adhesive power of the fiber cord for tires and rubber is heightened [0022]-[0023]

The JP'010 fails to teach that rubber is adhered to the nonwoven of the reinforcement layer by coating the nonwoven with a metal or metallic compound by PVD or CVD.

YOSHIKAWA et al. discloses a method for preparing rubbery composite materials and teaches that a metal such as zinc, copper, cobalt, and an alloy thereof can be integrated into a rubber composition to form a rubbery composite material exhibiting a firm bond between the components by press bonding the metal at a temperature which approximate to the temperature at which the rubber composition is usually heated for vulcanization; that these material can be readily deposited on a substrate as a thin film by a dry plating process such as vacuum deposition, ion plating, DC and RF magnetron sputtering, bipolar sputtering and RF sputtering processes; and that a rubber composition can firmly bond to the resulting metal thin film. (See Column 3 lines 34-45) The Yoshikawa et al. reference discloses that methods that involve adhesive bonding pose problems including coating consideration such as adherent pretreatment and adhesive maintenance, problems with the use of solvents, among others. (Col. 1, lines 54 through Col. 2, lines 1-54) The reference further teaches that the substrates that can be used in the practice of their invention are not particularly limited with respect to their material type, shape, and size, and that these may be properly selected depending on the intended application. (See Column 5, lines 18-41) Further, the reference teaches that the rubbery composite materials of their invention will find wide applications in steel tires, conveyor belts, and hoses, among others. (Column 4, lines 62-64)

Since both references are directed to materials used in the tire industry, the purpose disclosed by '932 would have been recognized in the pertinent art of JP'010.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the reinforcement layer and substitute it with the composite material of '932 in which the nonwoven is treated by PVD to adhere the rubber coating

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motivated by the desire of improving the adherence of the composite without the need of adhesive material or solvents as taught by the '932 (above).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Norca L. Torres-Velazquez
Primary Examiner
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December 4, 2006